

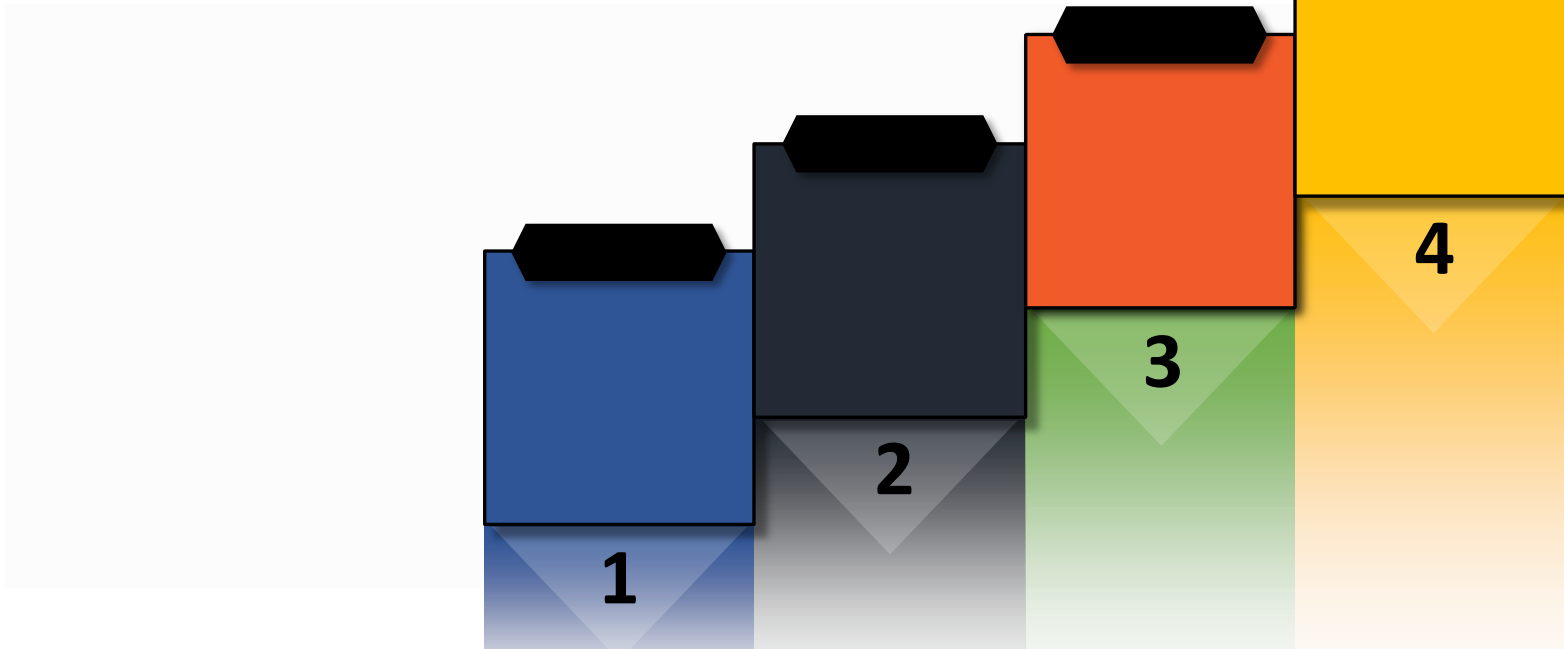
## Introduction

# FinTech:History and Today

Topic 1 AFIN8014 FinTech and Innovation

# Learning Objectives

1. Gain insights of FinTech development
2. Understand the FinTech global landscape: its investment, adoptions and domains
3. Outline the main Fin-technologies and the enabled financial innovations
4. Appreciate the disruption nature of FinTech



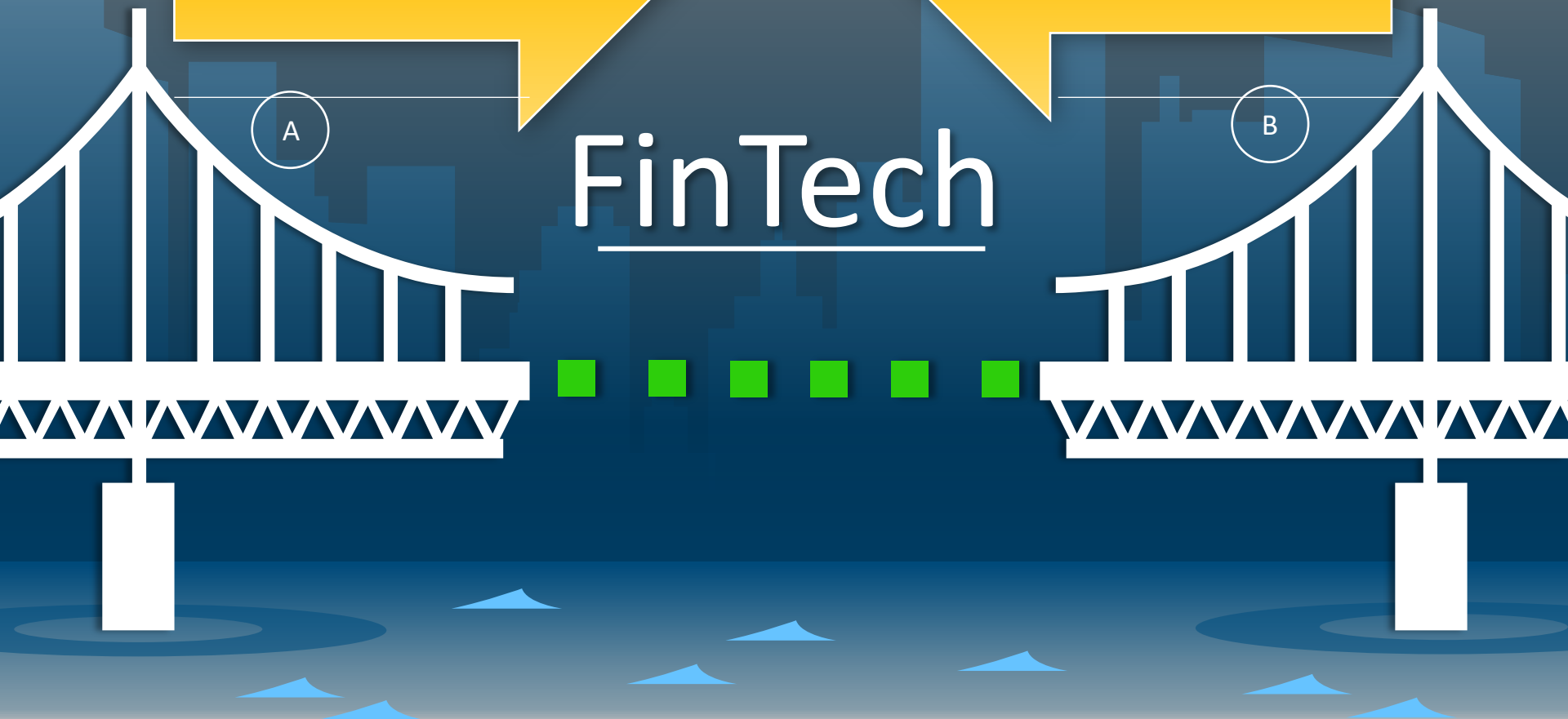
Finance

Technology

FinTech

A

B



# What is FinTech ?

The use of  
technology to  
deliver financial  
solutions

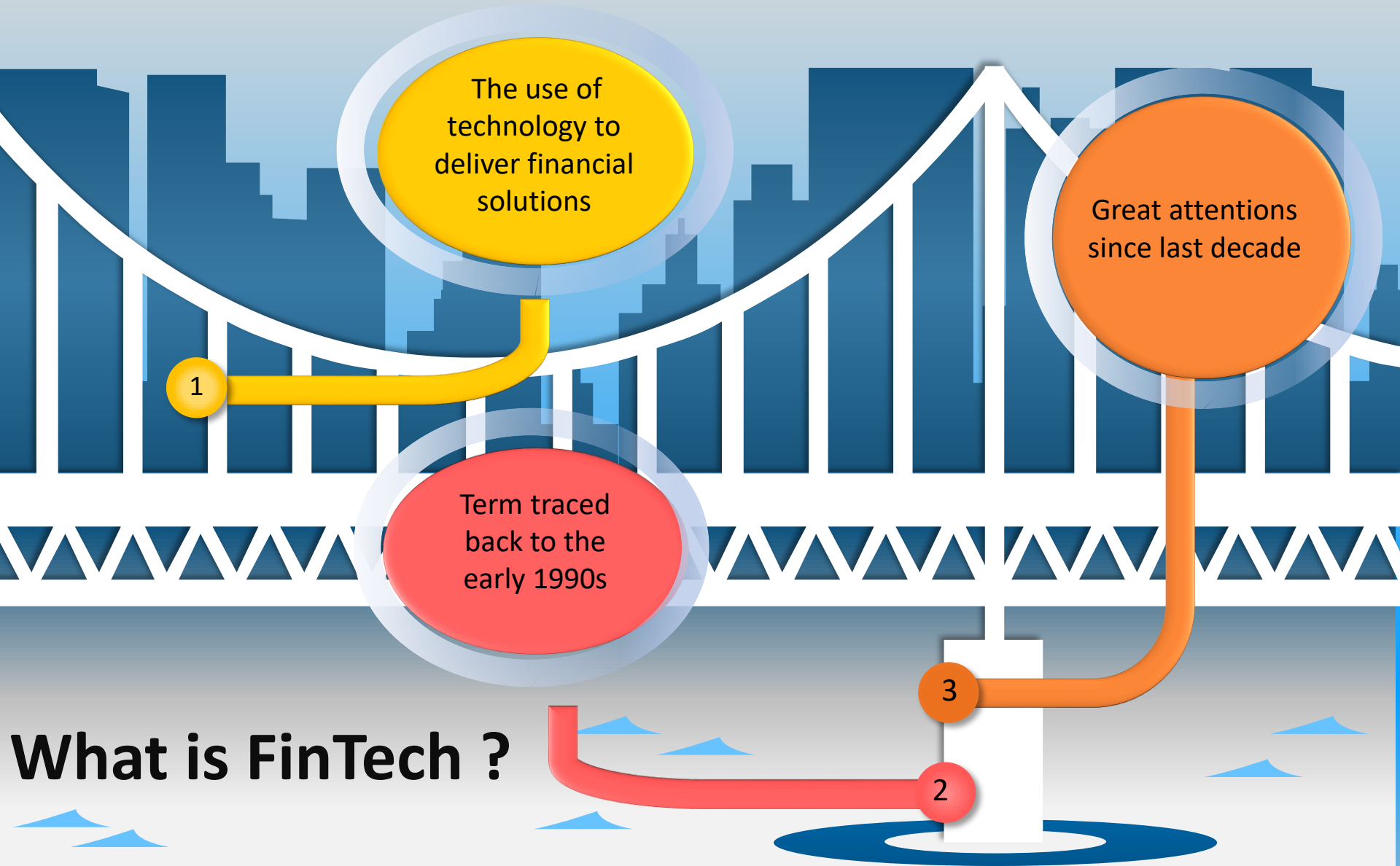
Great attentions  
since last decade

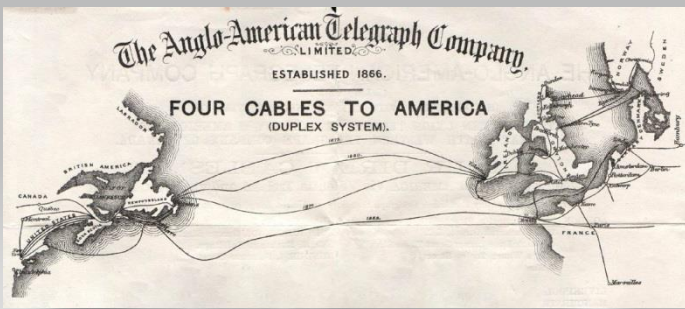
Term traced  
back to the  
early 1990s

1

3

2





**1866**  
the first  
transatlantic  
cable

1850

1950

1960

1965

1970

1975

1980



**1967**  
First ATM



**1973**  
SWIFT

**1971**  
NASDAQ



**1983**  
Online  
Banking



# 150 years of FinTech



**1990s**  
Quantitative  
Risk  
management



**1999**  
Internet  
Bubbles



**2009**  
Bitcoin Launched  
Kickstarter  
Established



**2007**  
iPhone Launched  
M-Pesa in Kenya



**2019**  
ASX: CHES  
Replacement with  
Blockchain

1990

1995

2000

2005

2010

2015

2020



**2008**  
Wealthfront



**2014**  
AliPay  
Re-branded as  
Ant Financial

# 150 years of FinTech

# 150 years of FinTech

- **1866-1967 : FinTech 1.0**

- The first transatlantic cable allowed the initial combination of finance and technology, culminating in the first period of financial globalisation.

- **1967-2008: FinTech 2.0**

- Analogue to digital, led by traditional financial institutions:

- **2008-Present: FinTech 3.0**

- Emergence of new players (*e.g. start-ups*) alongside existing large companies already in the space (*e.g. core banking vendors*).

- FinTech 3.0 : Developed Countries
- FinTech 3.5: Developing Countries

- Source: Arner et al., 2016

# 150 years of FinTech

Date	1866 - 1967	1967 - 2008	2008 - Current	
Era	FinTech 1.0	FinTech 2.0	FinTech 3.0	FinTech 3.5
Geography	Global / Developed	Global / Developed	Developed	Emerging / Developing
Key Elements	Infrastructure / computerisation	Traditional / internet	Mobile / Start-ups / New entrants	
Shift Origin	Linkages	Digitalization	2008 financial crisis / smartphone	Last mover advantage

*Source: Arner et.al., 2016*



# The Global Fintech Landscape: FinTech Adoption

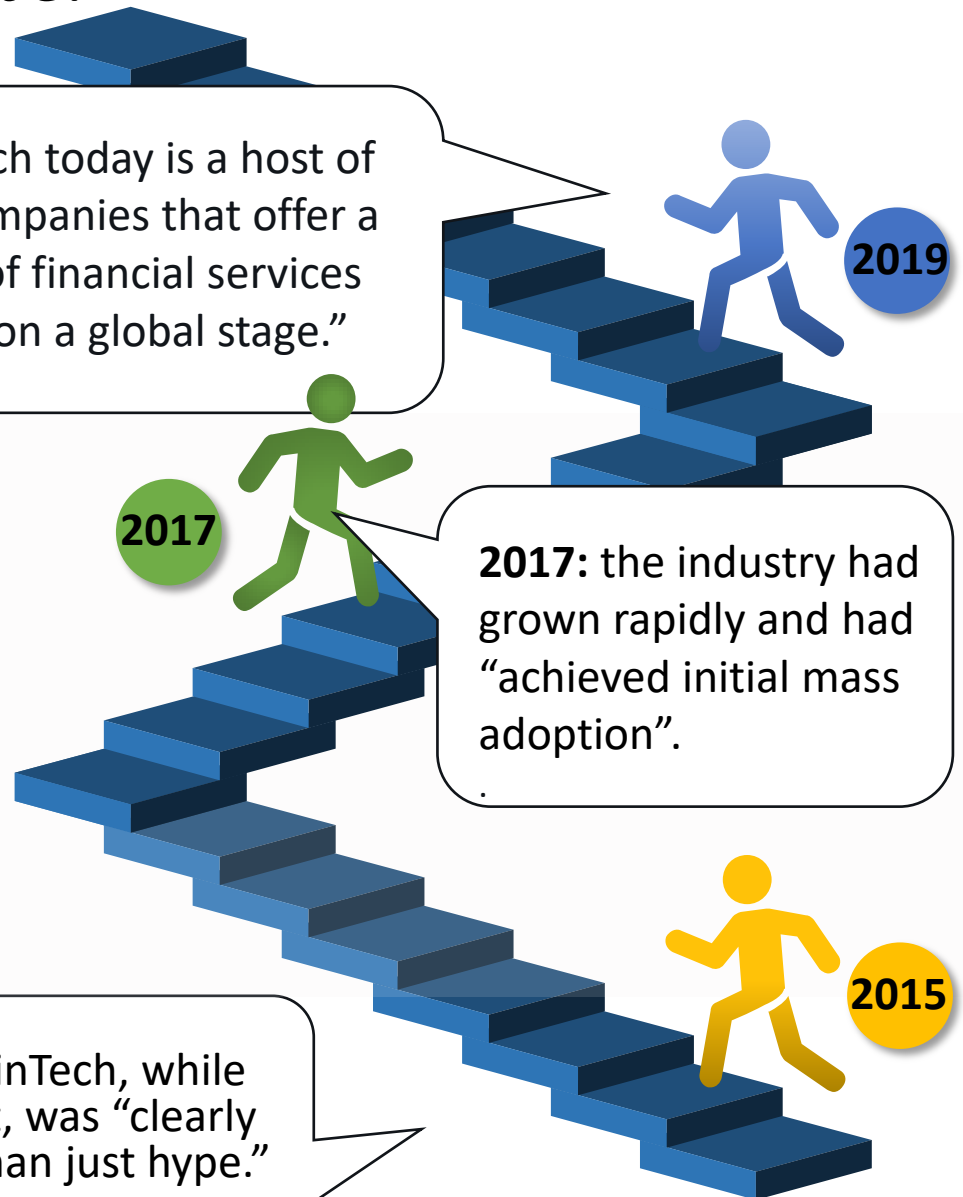
**2019:** “FinTech today is a host of seasoned companies that offer a broad array of financial services and operate on a global stage.”

EY defines FinTech as *‘organizations that combine innovative business models and technology to enable, enhance and disrupt financial services.’*

EY FinTech Adoption Index

**2015:** FinTech, while nascent, was “clearly more than just hype.”

**2017:** the industry had grown rapidly and had “achieved initial mass adoption”.

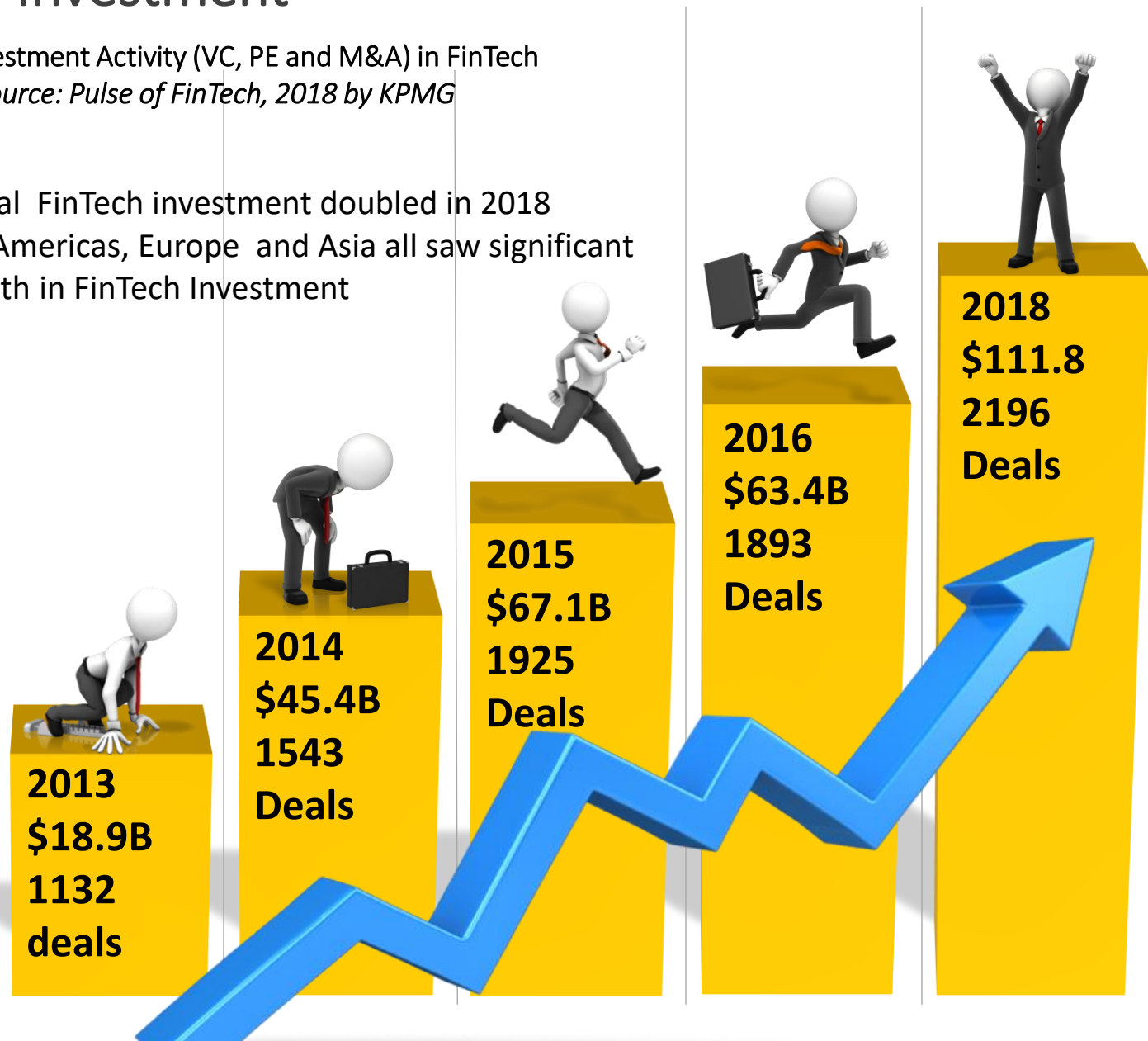


# The Global Fintech Landscape: FinTech Investment

Total Investment Activity (VC, PE and M&A) in FinTech

*Source: Pulse of FinTech, 2018 by KPMG*

- Global FinTech investment doubled in 2018
- The Americas, Europe and Asia all saw significant growth in FinTech Investment



# Global Top 10 FinTech Deals in 2018



1 **Refinitiv** — \$17B, Eagan, US  
Institutional/B2B  
*Buyout*

2 **Ant Financial** — \$14B, Hangzhou, China  
Payments/transactions  
*Series C*

3 **Worldpay** — \$12.9B, London, UK  
Payments/transactions  
*M&A*

4 **Nets** — \$5.5B, Ballerup, Denmark  
Payments/transactions  
*Buyout*

5 **Blackhawk Network Holdings** — \$3.5B, Pleasanton, CA  
Payments/transactions  
*Buyout*

6 **VeriFone** — \$3.4B, San Jose, US  
Payments/transactions  
*Buyout*

7 **iZettle** — \$2.2B, Stockholm, Sweden  
Payments/transactions  
*M&A*

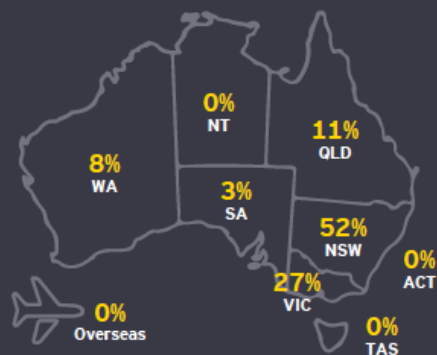
8 **Fidessa Group** — \$2.1B, Woking, UK  
Institutional/B2B  
*Buyout*

9 **lpreo** — \$1.9B, New York, US  
Institutional/B2B  
*M&A*

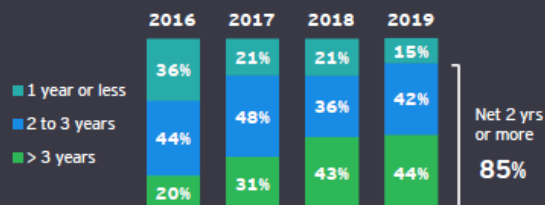
10 **IRIS Software Group** — \$1.7B, Datchet, UK  
Institutional/B2B  
*Buyout*

# FinTech Australia

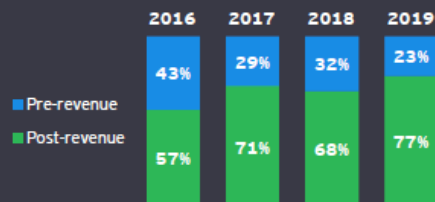
## Business base



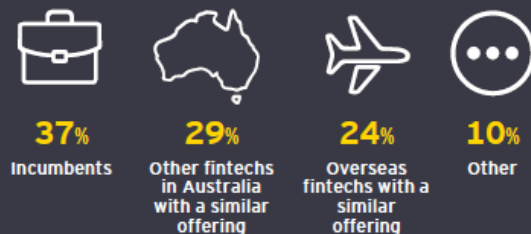
## Age of company (excl. didn't answer)



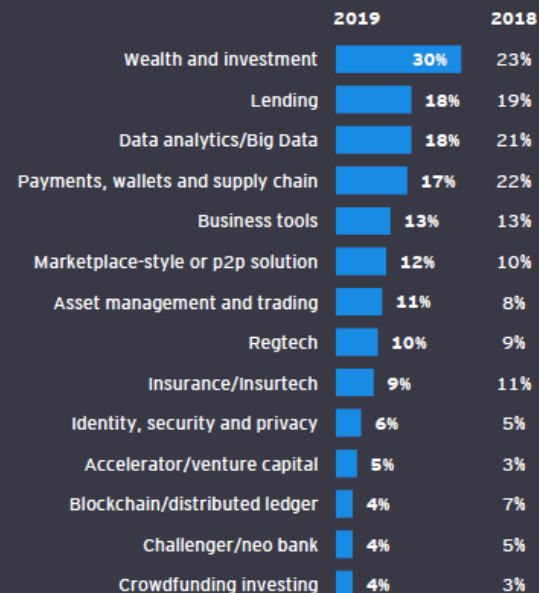
## Company stage



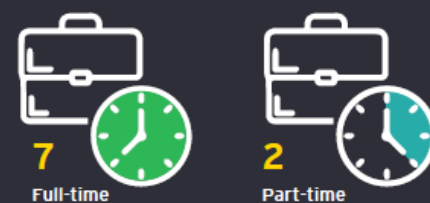
## Biggest competitors (excl. none)



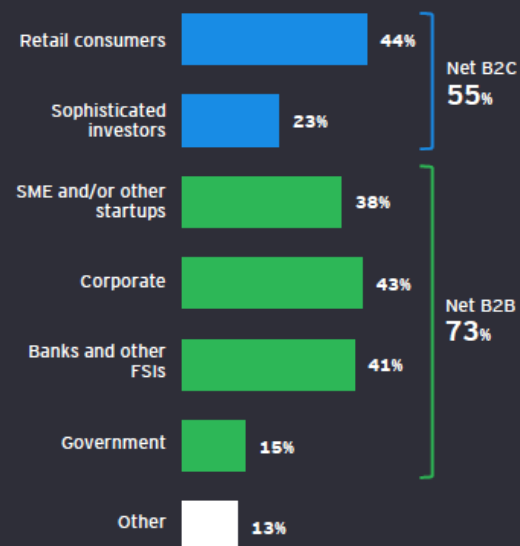
## Type of fintech (multiple response)



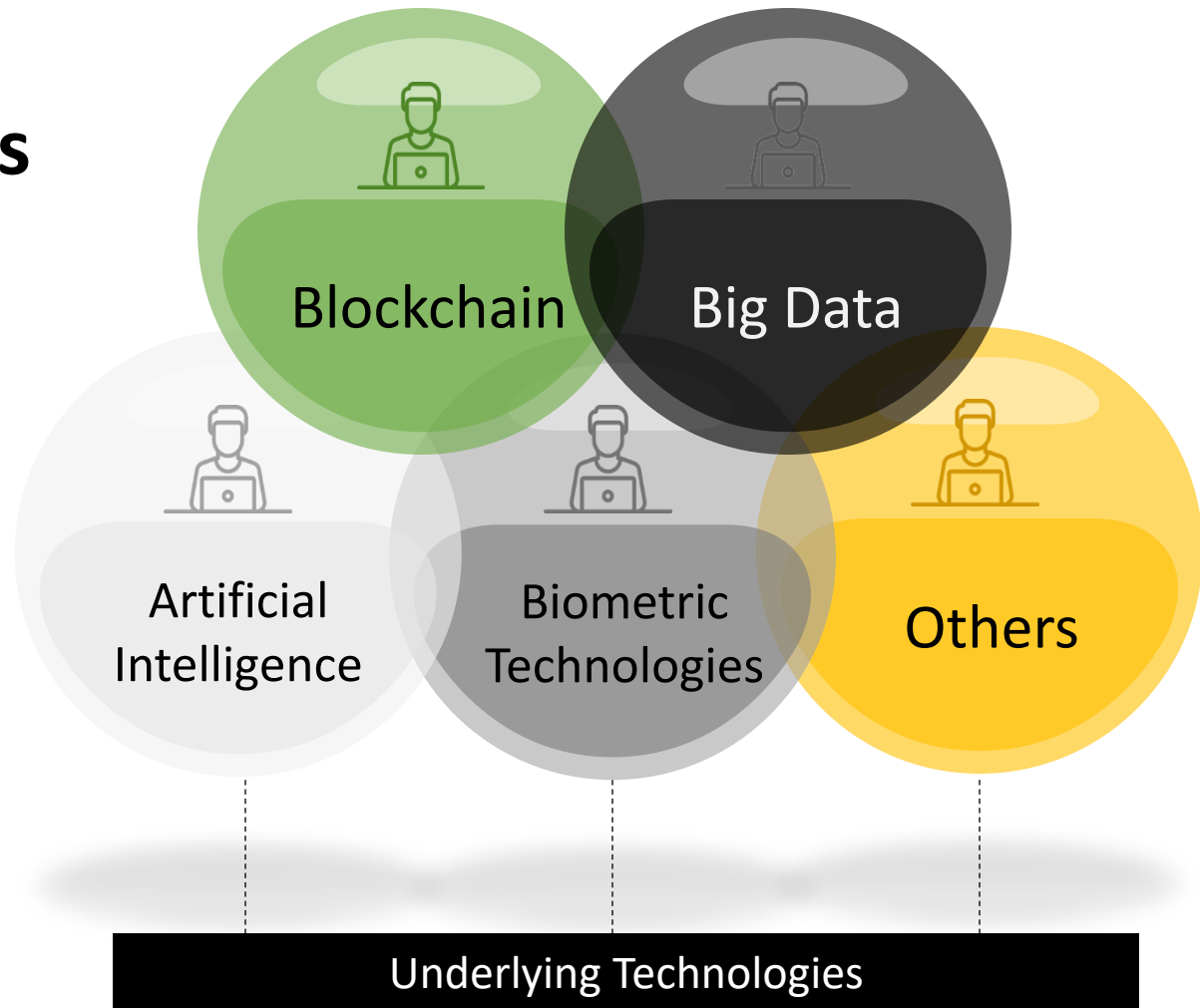
## Number of employees (median)

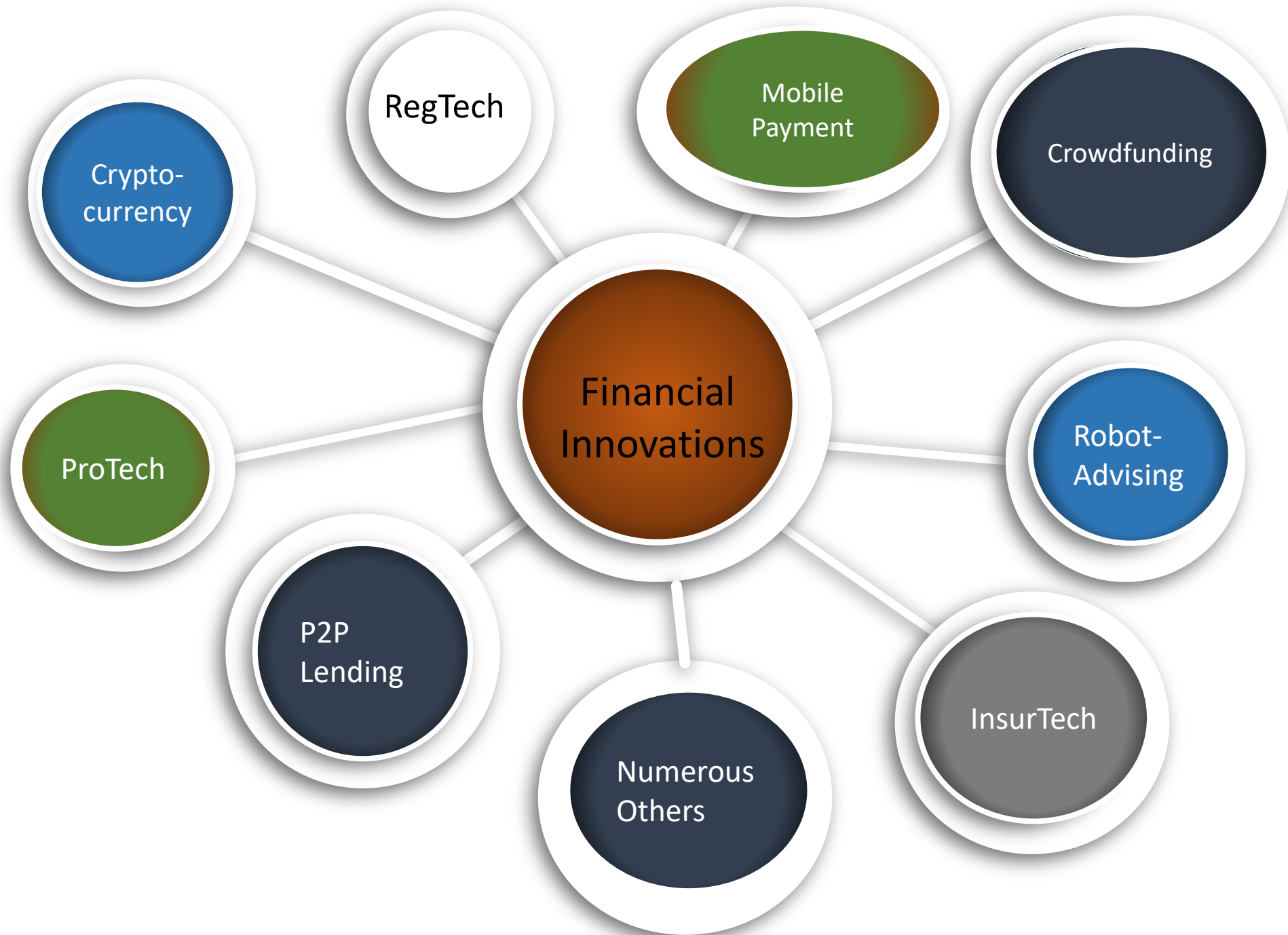


## End customers (multiple response - excl. don't know)



# Fin- Technologies

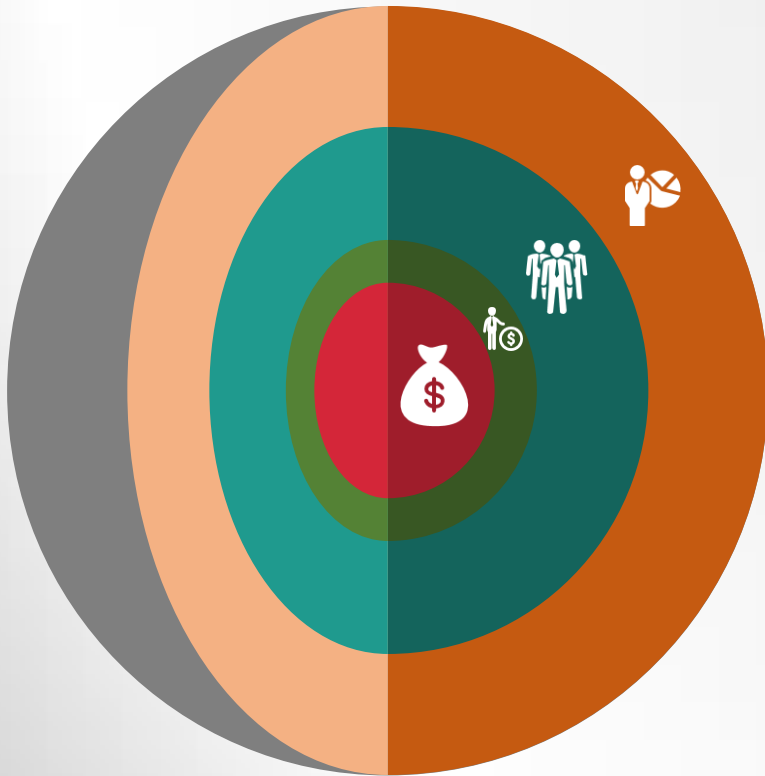




# Disruption Nature of FinTech



# Disruption Nature of FinTech



## GFS

ensures that **scarce savings** are **allocated** optimally among competing investment over **time** and across **geographic** space

## Intermediation

- **links** providers and users of funds
- **effectuates** the primary functions of finance and create **efficiencies**

## FinTech Disruption

Driven by technologies and regulations, more people seek to **bypass** traditional financial markets to obtain **lower costs, fewer restrictions and more efficiency**.

## FinTech Disruption

**Competition/Cooperation** among disruptors and incumbent financial institutions



# Disruption Nature of FinTech



## Existing Problems

- 
- A blue door frame with a grey door that is slightly open to the right. On the inner edge of the door frame, there is a blue oval with a white circle and a keyhole icon. On the grey door, there is a blue oval with a white keyhole icon.
- Money and Payment
  - Financial Advisory
  - Markets and Trading
  - Pricing and Risk
  - Others

## Be innovative to solve problems

- Altering the relationship between consumers and financial service providers
- Lowering barriers for market entry
- Disrupting the existing business models in financial industry
- Challenging the roles of traditional financial intermediaries
- Competition and/or cooperation among incumbents and new entries
- How to evaluate innovations and how to regulate them ?

# Applications of New Technologies to Financial Services

Technology	Payment	Advisory	Investment & Trading	Lending & Funding	Insurance	Security	Operations	Communications
Blockchain (Distributed Ledger)	×	×	×	×	×	×	×	×
Big Data		×	×	×	×	×	×	×
Internet of Things					×			×
Cloud Computing				×			×	
Artificial Intelligence		×	×		×			×
Biometric					×	×		
Augmented/ Virtual Reality		×	×					×

Source: table 1, OECD (2018), Financial Markets, Insurance and Private Pensions: Digitalisation and Finance